IN THE CLAIMS:

Please cancel claims 1 through 4 and 20.

Please amend claims 5 and 15 as follows:

1. (CANCELED)

2. (CANCELED)

3. (CANCELED)

4. (CANCELED)

5. (CURRENTLY AMENDED)   A method of section cutting and analysis of a computer model, said method comprising the steps of:

selecting a computer generated model of a structural member, wherein the computer generated model is stored in a memory of a computer system;

establishing cutting planes and a cutting path by locating at least a first cutting plane and a last cutting plane on the computer generated model, wherein the first and last cutting planes define a the cutting path;

automatically generating at least one section by cutting the computer generated model into the at least one section along the cutting path;

maintaining the section in a memory of the computer system;

automatically analyzing the section using a computer aided engineering (CAE) analysis;

determining if the CAE analysis of the section meets a predetermined criteria;

modifying the section if the predetermined criteria is not met; and

using the section in the design of the model if the predetermined criterion is met.

6. (ORIGINAL)   A method as set forth in claim 5 including the step of determining if the model is a computer aided design (CAD) model and prompting a user to input a shell thickness if the model is a CAD model.

7. (ORIGINAL)   A method as set forth in claim 5 including the step of determining if the model is a computer aided design (CAD) model and prompting a user to input a material type if the model is a CAD model.

8. (ORIGINAL)   A method as set forth in claim 5 including the step of defining an area of the model for locating the cutting path after said step of selecting a computer model.

9. (ORIGINAL)   A method as set forth in claim 5 including the step of prompting a user to input a number of sections to generate, prior to said step of locating the first and last cutting planes.

10. (ORIGINAL)   A method as set forth in claim 5, wherein said step of locating a cutting plane includes the step of selecting two points on the model and generating a vertical plane oriented perpendicular to a line between the points.

11. (ORIGINAL)   A method as set forth in claim 5 wherein said step of locating a cutting plane includes the step of selecting a line on a computer aided design (CAD) model defining the cutting plane.

12. (ORIGINAL)   A method as set forth in claim 5 including the step determining if the model is a finite element analysis (FEA) model and simplifying the FEA model by replacing a shell element along the cutting path with a beam element.

13. (ORIGINAL)   A method as set forth in claim 5 wherein said step of analyzing the section includes the step of using finite element analysis to determine a geometric property of the section to assess its stiffness.

14. (ORIGINAL)   A method as set forth in claim 5 wherein said step of analyzing the section includes the step of using finite element analysis to determine a crush strength of the section.

15. (CURRENTLY AMENDED)   A method of section cutting and analysis of a computer model of a structural member, said method comprising the steps of:

selecting a model of the structural member from a library of models stored in a memory of a computer system having a memory, a processor a user input device and a display device;

defining an area of the model for section cutting and analysis using the device;

establishing cutting planes by locating at least a first cutting plane and a last cutting plane on the model, wherein the cutting plane is located by selecting two points on the model and generating a vertical plane oriented perpendicular to a line between the points;

establishing a cutting path by defining a the cutting path between the first and last cutting planes;

automatically generating sections by cutting the model into a predetermined number of sections along the cutting path;

maintaining the cut sections in the memory of the computer system;

determining if the model is a finite element analysis (FEA) model and simplifying the FEA model by replacing a shell element along the cutting path with a beam element;

automatically analyzing the sections using a computer aided engineering (CAE) analysis to determine geometric properties and crush strength of the section;

determining if the CAE analysis of a selected section meets a predetermined criterion;

modifying the selected section if the predetermined criterion is not met; and

using the selected section in the design of the model if the predetermined criterion is met.

16. (ORIGINAL)   A method as set forth in claim 15 including the step of determining if the model is a computer aided design (CAD) model and prompting a user to input a shell thickness if the model is a CAD model.

17. (ORIGINAL)   A method as set forth in claim 15 including the step of determining if the model is a computer aided design (CAD) model and prompting a user to input a material type if the model is a CAD model.

18. (ORIGINAL)   A method as set forth in claim 15 including the step of prompting a user to input a number of sections to cut along the cutting path.

19. (ORIGINAL)   A method as set forth in claim 15 wherein said step of locating a cutting plane includes the step of selecting a line on a computer aided design model defining the cutting plane.

20. (CANCELED)